
Garland Technology and Riverbed Technology SteelCentral Provides End-to-End Visibility

Garland Technology provides complete access for Riverbed® SteelCentral™ Digital Experience Management platform. Together the two solutions enable end-to-end visibility to detect and resolve network and security performance issues fast, and improve service performance.

100% Network Access and Visibility

Garland Technology's Test Access Points (TAPs) collect and send 100% of the live wire data, allowing real-time analysis on data flow, transactions and sessions. It gives you the information you need to spot anomalies, make policy changes and eliminate the risk of oversubscribed SPAN ports.

This information can then be visualized by Riverbed® SteelCentral™ AppResponse, continuous full packet capture and with easy-to-use analysis modules for network forensics, application analytics, web transactions, unified communications, and database analysis.

The Riverbed SteelCentral™ product family is a performance management suite that combines user

experience, application, and network performance management to provide the visibility needed to diagnose and cure issues before end users notice a problem, call the help desk, or jump to another web site out of frustration.

The ease of the plug-and-play architecture of Garland Technology and SteelCentral solutions deploy seamlessly in complex environments, providing network administrators with the vital insight they need to proactively and effectively ensure network and applications availability.

Benefits

- Reliable connectivity for Riverbed SteelCentral solutions ensuring 100% traffic visibility
- Tested and certified network TAPs in 1G/10G/40G/100G speeds
- Make policy changes based on live, real-time data
- Eliminate risk of oversubscribed SPAN ports
- Available in single-mode or multi-mode passive fiber
- Scalable design, available in single, dual, triple or quad TAPs (1U, 28 and 56 TAP solutions)
- High-density data center TAP solutions
- 100% secure and invisible: no IP address, no Mac address – cannot be hacked

Riverbed SteelCentral Architecture

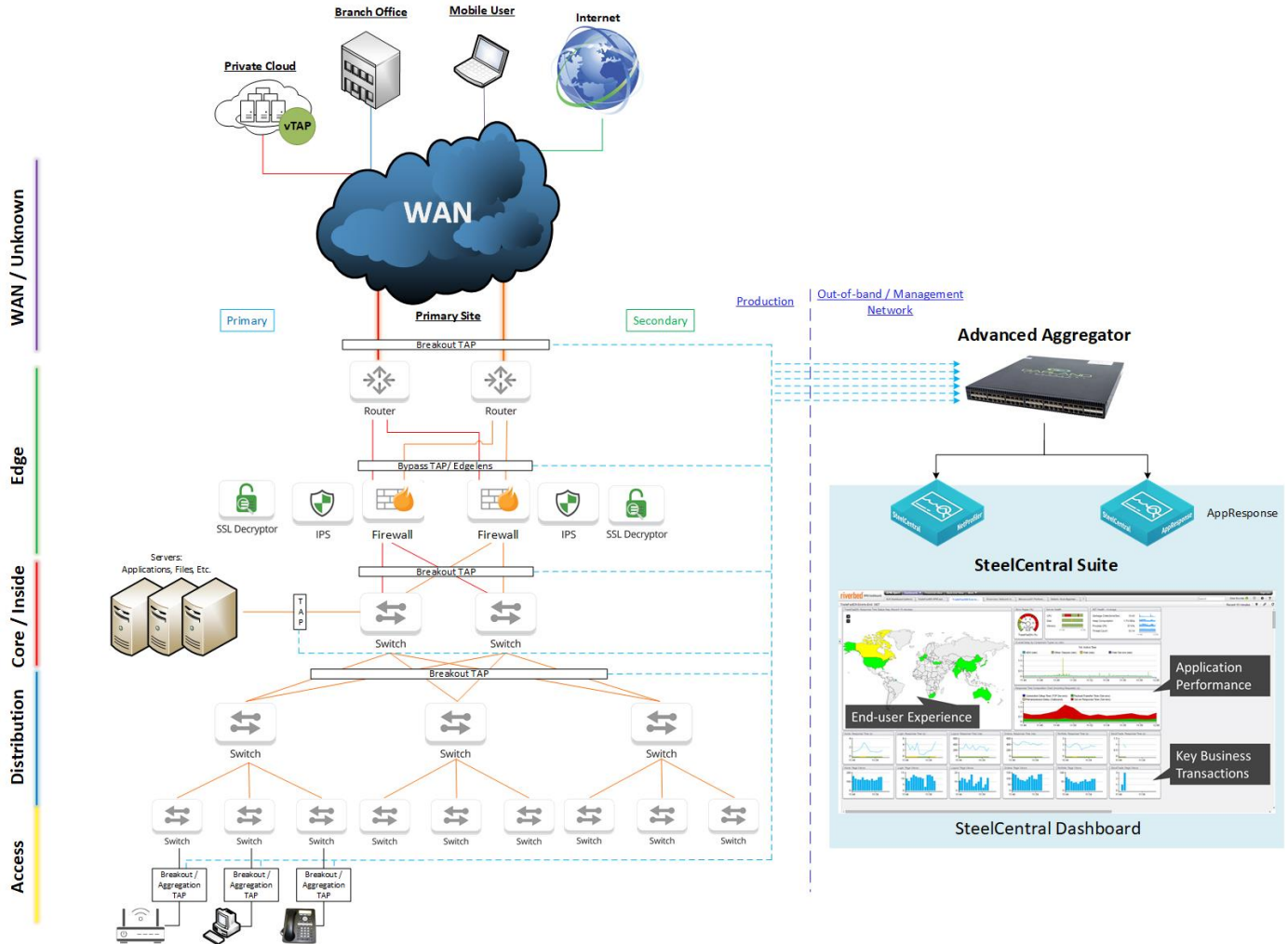


Figure 2 This is an example of the Riverbed SteelCentral Architecture featuring Garland Network TAPs and Advanced Aggregators.

Riverbed SteelCentral network performance monitoring solutions provide a complete picture of the health of your network, but monitoring tools are only as good as the information they are receiving. Garland Technology’s Network TAPs are purpose-built appliances that provide the passive access to packets that SteelCentral AppResponse depends on.

A TAP can fit within any segment of the network and push an exact copy of live network traffic to out-of-band

tools in the management network:

TAP the WAN

Using a Garland Technology TAP between the ethernet handoff and the gateway router will provide visibility into the traffic coming in from a WAN, Metro ethernet, or data encapsulated with MPLS labels. This un-processed traffic will offer a baseline dataset that can be used against processed traffic to determine the efficiency of security tools on the network.

TAP the Edge

The edge of the network handles the routing and security of both ingress and egress network traffic. This is a critical point in the network where network intrusions are stopped, malware is blocked, and bandwidth statistics are gathered. Garland Technology's EdgeLens® fail-safe bypass TAP in this location will increase the resiliency of the network edge by preventing the security appliances from becoming a point of failure while providing SteelCentral appliances visibility into this important area.

TAP the Inside

While the edge of the network is important, a Garland Technology TAP placed on the inside will also provide valuable information. Tapping the connection to servers will grant visibility into who or what is establishing connections to which server. This information can be used to determine when network and server upgrades may be needed or even used to prevent internal threats that never reach the edge.

TAP the Distribution Layer

Using Garland Technology TAPs with distribution layer switches will give an aggregated view of specific areas of your organization. If different departments are

separated by network segments, a TAP can provide insight into bandwidth and application usage on a large scale to SteelCentral appliances.

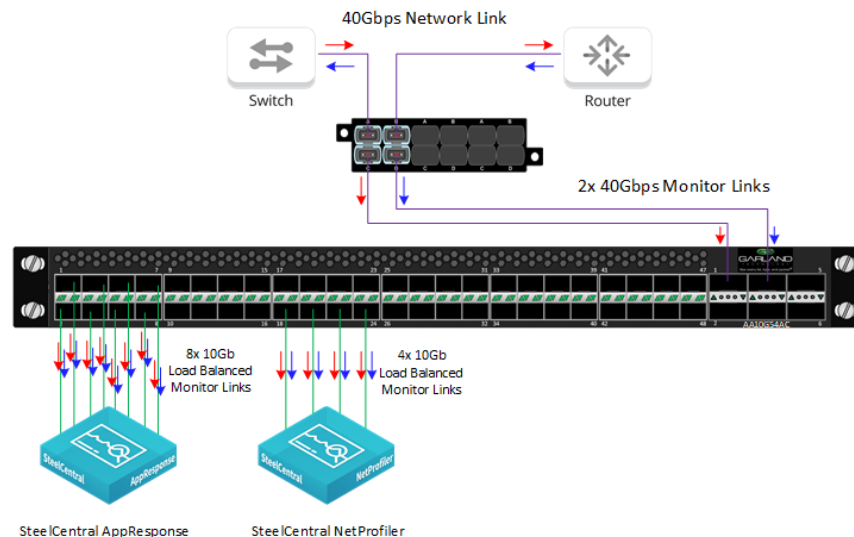
TAP the Access Layer

If the Distribution layer gives a total view, the access layer will provide a more detailed and granular view typically used in troubleshooting uses. At this layer, a Garland Technology TAP can provide specific information on individual users, workstations, or VoIP connections. While this information can be obtained and aggregated to SteelCentral appliances at higher levels of the network, tapping the access layer on a need-to-know basis grants visibility into an area with a considerably more manageable and targeted dataset that can be viewed using SteelCentral AppResponse.

Management Network

Garland Technology's Advanced Aggregators are devices that collect and distribute the monitoring traffic from the TAPs to SteelCentral AppResponse. Advanced Aggregators are also capable of pre-filtering traffic prior to sending to monitoring tools for advanced filtering or takes the place of packet brokers in applications where only L2-L4 filtering is required.

TAP Your Riverbed SteelCentral



This example shows how SteelCentral AppResponse, an appliance that typically has 10Gb ports, can obtain monitor streams from a 40Gb network link.

By using the Garland OM4501-SR4B passive fiber TAP, the traffic going over a 40Gbps Multimode network link can be unobtrusively copied bit-for-bit. The OM4501-SR4B is a breakout TAP, meaning each direction of traffic will generate its own monitor link: Eastbound traffic out Port C and Westbound traffic out Port D.

The two 40Gb monitor links generated from the TAP would then be terminated into the open QSFP+ ports on the 10G Advanced Aggregator (AA10G54AC). These 40Gb ports can now be designated as “Ingress Ports” within the AA10G. Ingress traffic can be mapped to

egress out any other port (or ports) on the AA10G, allowing for multiple tools to receive traffic at once.

In the case of the SteelCentral AppResponse appliance, eight 10Gb SFP+ monitoring ports are available on the device itself. If a corresponding eight 10Gb SFP+ ports on the AA10G are configured to egress traffic to the SteelCentral AppResponse appliance, these eight ports can be assigned to a port group (or LAG) to have the traffic evenly distributed between each port. For full packet capture and throughput, Westbound traffic can be assigned to a group of four ports and Eastbound traffic set to an additional group of four ports. As traffic is load balanced between these ports, a hash can be configured to keep packets within the same session together as they traverse into the SteelCentral AppResponse tool.

About Garland Technology

Garland Technology is an industry leader delivering network products and solutions for enterprise, service providers, and government agencies worldwide. Since 2011, Garland Technology has developed the industry's most reliable test access points (TAPs), enabling data centers to address IT challenges and gain complete network visibility. For more information, or learn more about the inventor of the first bypass TAP, visit GarlandTechnology.com or [@GarlandTech](https://twitter.com/GarlandTech).



About Riverbed

Riverbed®, The Digital Performance Company™, enables organizations to maximize digital performance across every aspect of their business, allowing customers to rethink possible. Riverbed's unified and integrated Digital Performance Platform™ brings together a powerful combination of Digital Experience, Cloud Networking and Cloud Edge solutions that provides a modern IT architecture for the digital enterprise, delivering new levels of operational agility and dramatically accelerating business performance and outcomes. At more than \$1 billion in annual revenue, Riverbed's 30,000+ customers include 98% of the *Fortune* 100 and 100% of the *Forbes* Global 100. Learn more at riverbed.com.

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